

BRITISH COLUMBIA DEPARTMENT OF LANDS
FOREST SERVICE
HON. WILLIAM R. ROSS, K.C., Minister of Lands

BRITISH COLUMBIA TIMBER FOR PRAIRIE FARMS

POULTRY HOUSES

FARM BUILDINGS SERIES

BULLETIN No. 7



THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA.

VICTORIA, B.C.:

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1915.

BRITISH COLUMBIA

LUMBER, SHINGLES

and other products of

Douglas Fir

Western Larch

Mountain Western Pine

Western Red Cedar

Western Hemlock

Spruce

Western White Pine



CONTENTS.

	PAGE.
Introduction	5
Poultry Houses for Prairie Farms	7
Requirements of a Poultry House	7
Proportions	8
Interior Arrangement	9
Permanent versus Portable Houses	10
Permanent Poultry House No. 1	13
Portable Poultry House No. 2	18
Portable Poultry House No. 3	22
Trap-nests	26
Feed-hoppers	27
Coop for Setting Hen	29
Wood as a Building Material	31
British Columbia Timber	31
Woods to use	32
British Columbia Forest Service Bulletins	34
Other Publications	34

INTRODUCTION.

TO THE PRAIRIE FARMER.

In the forests of British Columbia there stands to-day more than half Canada's supply of commercial timber. Forest surveys made during recent years throughout the Province show 30,000,000 acres of timber ready for the market, and 45,000,000 acres of younger growth that will reach commercial size during the present century. The present merchantable stand is estimated at 400,000,000,000 feet board measure.

Taught by the experience of older countries, British Columbia has adopted a vigorous conservation policy and is carefully protecting her vast forest areas from fire and misuse.

The manufacture of lumber and other wood products is the most important industry of this forest Province. Each year 1,500,000,000 feet of timber is cut to supply the sawmills, pulp and paper mills, and other wood-using factories west of the Canadian Rockies. But the forests produce more wood each year than the mills can find markets for, and so much timber goes to waste. The most of the timber is public property; the prosperity of the Province depends very largely upon the lumbering industry; and it is therefore the duty of the Government to help secure the widest possible market for British Columbia lumber both in foreign countries and in Canada.

The main market for Western lumber to-day is in the Prairie Provinces of Canada. Each farm is, after all, a factory for agricultural produce and needs a well-built plant like any other factory. This means good buildings—a comfortable, convenient house, good barns, granaries, silos, fences, and shelter for machinery. The best material for this is wood. It is cheap, handy to use, warm, sanitary, and it lasts. British Columbia therefore desires to give the citizens of Alberta, Saskatchewan, and Manitoba full information concerning her forest products, asking them to bear in mind that these products are "grown and manufactured in Canada," and that trade between the Provinces of the Canadian West is the surest foundation for our common prosperity.

The Bulletins.

Valuable bulletins on farm buildings are now being issued by agricultural authorities all over Canada and the United States. The College of Agriculture of the University of Saskatchewan was engaged in this most useful work; the Government of British Columbia entered into a co-operative agreement with the University, and the series of farm bulletins listed on the last page of this booklet is the result. The agricultural information contained herein, and the plans and bills of material were prepared under the immediate supervision of Mr. W. J. Rutherford, Dean of the College of Agriculture, and thus give up-to-date and authoritative views on the agricultural subjects dealt with. The information concerning lumber is supplied by the Forest Service of the Government of British Columbia.

In the building plans, five things are aimed at in particular:—

- (1.) That they should be specially designed to meet Prairie conditions.
- (2.) That they should be simple and practical to meet the needs of the average farmer.
- (3.) That ordinary stock sizes of lumber should be used throughout in order to keep the cost low.
- (4.) That it should be easy for the farmer to make additions to the buildings whenever more accommodation should be needed.
- (5.) That the details of the plans should be readily alterable to suit individual needs.

The plans printed in these bulletins show enough detail for them to be used as working plans. Any one wishing to obtain large-scale working plans can secure them at cost by writing to the Chief Forester, Victoria, B.C. A reference list of bulletins and of sources of agricultural information will be found on the last page.

Note.

While it is understood that the agricultural authorities in Alberta and Manitoba have already published pamphlets on farm buildings, and contemplate issuing others, it is believed that all Prairie farmers will be interested in the British Columbia bulletins, and editions for general distribution on the Prairies have accordingly been printed.

UNIVERSITY OF SASKATCHEWAN.

WALTER C. MURRAY, *President.*

COLLEGE OF AGRICULTURE,

W. J. RUTHERFORD, *Dean.*

Poultry Houses for Prairie Farms.

By A. R. GREIG, PROFESSOR OF AGRICULTURAL ENGINEERING, AND R. K. BAKER, ASSISTANT PROFESSOR OF ANIMAL HUSBANDRY (IN CHARGE OF POULTRY).



HE bright, dry climate of the Prairie Provinces, the cheap land, cheap feed, and ready markets make poultry-raising a most profitable side-line on the farm. It requires little capital to start, does not seriously interfere with the other farm-work, and is a source of income every month in the year.

A flock of 100 strong, healthy pure-bred hens of a general-purpose breed, like the Plymouth Rocks, Wyandottes, or Rhode Island Reds, may be made to produce annually from \$200 to \$500 worth of eggs and poultry.

The demand for eggs for hatching and pure-bred stock for breeding purposes is growing rapidly, and the poultryman who gets started now with the right kind of birds will find a ready sale at good prices for all he can produce.

REQUIREMENTS OF A POULTRY HOUSE.

While good birds and intelligent care are essential to success, a suitable poultry-house is equally important. To be effective, a poultry-house should provide at all seasons for the comfort of the birds; it should be convenient for the attendant; it should be neat in appearance and strongly built, but the cost should not exceed \$2 per hen capacity. (At present prices for lumber it is possible to build good poultry-houses for \$1 per hen.)

To be comfortable for the birds a house must be dry, well ventilated, well lighted, and should provide 4 or 5 square feet of floor-space and 7 inches of roosting-room for each hen.

To ensure dryness a house must be placed on a well-drained spot, must have a tight roof and tight walls. It must also be ventilated in such a way that all the moisture given off into the air from the fowls' lungs will be removed from the building. Cotton windows will give an evener temperature and better ventilation without draughts than any other system yet tried. Where these cotton windows are regularly swept to prevent the accumulation of dust and frost, 1 square foot of cotton to every 12 square feet of floor-space in the house is considered sufficient. On plants where less sweeping is done 1 foot of cotton to 6 feet of floor-space, or even 1 foot of cotton to 4 feet of floor-space, would not be too much. The cotton should be thin and unbleached. Bleached cotton contains so much sizing that little air can get through it.

To ensure proper lighting the house should face south and should have about 1 square foot of glazed window for each 12 square feet of floor-space. A high, narrow window is preferable to a low, wide one, as it will let the sunlight reach a greater proportion of the floor-space in the course of a day. If glazed windows are considered too expensive, or if the correct size of sash is hard to get, equally good results may be had if all the windows are of cotton, except when a storm beating directly on the front of the house makes it unwise to open up any windows. In severe winter weather frost collects on the glass, and dust settles in this frost till no more light comes through the glass than through the cotton. To let the birds have direct sunlight it then becomes necessary to raise one window in each house for three or four hours each day.

Proportions.

The single-pitch or shanty-roofed house is the simplest type. It is also one of the best. It should be just high enough that a man can work in it to advantage, but not so high as to waste all the body-heat from the fowls. Six feet high across the middle of the house should be satisfactory. The front would then be between 7 and 8 feet high. Investigation has shown that to have sunlight reach all parts of the floor daily the width of the house should not be greater than twice the height of the south or front side. For greatest economy in construction the house should be square; it will then be 14 feet long. The height of the rear wall should be about 4 feet 6 inches. We thus have a convenient standard house, 14 x 14 feet, 7 or 8 feet high in

front, $4\frac{1}{2}$ or 5 feet behind. It is easily built, and uses ordinary stock lumber without waste. If the south side is boarded up to a height of 2 feet from the ground, the balance of the front, except about 1 foot next the roof, may be left for windows. A doorway 3 feet wide should be left in the east end, so that a wheelbarrow can be used in cleaning out. Such a house will accommodate fifty hens. Any required number of such houses may be built, or a long house having several pens of these dimensions. (For plan and details of construction see House No. 3, Figs. 6 and 7.)

Interior Arrangement of Poultry House.

When putting in the poultry-house fixtures, plan to leave as much floor-space as possible clear. The number of square feet over which we can spread litter for the birds to scratch in determines how many hens can profitably be kept in the house.

By building in a droppings-board $3\frac{1}{2}$ feet wide across the back of a house 14 feet square, nearly 50 square feet more of floor-space is available for scratching-room than when no droppings-board is put in. Without the droppings-board the litter beneath the roosts becomes fouled, so that the birds will not work in it.

If the poultry-house door is in the east side, a cock-pen may be conveniently made by partitioning off a place, 2 feet wide by $3\frac{1}{2}$ feet long, next the east wall and above the droppings-board, having the tight partition reach from the droppings-board to the roof. The front of this cock-pen should consist of a slatted door.

Three roosts made of 2 x 4 scantling, 12 feet long, placed on edge, should reach from the partition of the cock-pen to the west wall of the house at a height of 8 or 10 inches above the droppings-board. If the rear roost is 9 or 10 inches from the back wall and the others placed about a foot apart, they will be satisfactory. (For very large birds the droppings-board should be made 4 feet wide and the roosts spaced farther apart.)

A curtain of thin unbleached cotton the full width of the house should be made fast to the rafters. It may have a roller across the lower side arranged with cords and pulleys, so that the curtain may be fastened at any desired height. In this way the temperature of the roosting-quarters can be regulated. The air behind the curtain should be good. If any smell is noticed raise the curtain a little. Don't let

the birds get hot or they will feel the cold when let out in the morning. (Usually the curtain will be raised enough that they can get out when they wish.)

Nests may be nailed along the west wall at a convenient height from the floor, and not close enough to the south wall to interfere with raising the cotton curtain. Or a set of trap-nests may be used as shown in the plans.

The water-supply should be arranged on a shelf or platform at least 2 feet above the floor. The platform should be large enough to permit of several hens standing on it to drink at the same time. An ordinary enamel milk-pan makes a convenient water-dish which may be easily emptied of ice during winter.

A hopper having three compartments—one each for grit, oyster-shell, and dry mash—should be fastened to the wall at a convenient height.

Some use a dust-box built on legs which may be moved into the sunlight or carried from house to house.

With the above arrangement, practically all the floor-space may be covered with litter for the fowls to work in.

If wet mash is to be fed, use a shallow trough, and clean it often.

PERMANENT VERSUS PORTABLE HOUSES.

When the poultry-house is permanent, the fowls start from the same place every morning and range over the same ground, until all the available grit and mineral food is used up, all vegetable food eaten or tramped down, and the ground so contaminated by droppings that the stock gets run down and sickly. The ground over which they have ranged should be ploughed once or, better, twice each year, and some quick-growing crop sown, such as oats, rape, or winter rye.

With a portable house, the flock may be moved to a fresh range merely by putting a rope completely round the house above the skids, hitching on a steady drawing team of horses, and letting them haul the house to its new site.

Poultrymen have learned that free range from spring till fall is absolutely necessary for breeding stock and for young chicks. In no other way can the vitality of the birds or the fertility of the eggs be maintained. A number of small portable houses spread over a considerable acreage is best for this purpose. During winter, conditions are most favourable and the cost of labour least, when a large number of birds can be housed under one roof. For this reason two sets of

• PERMANENT POULTRY HOUSE NO. 1 •

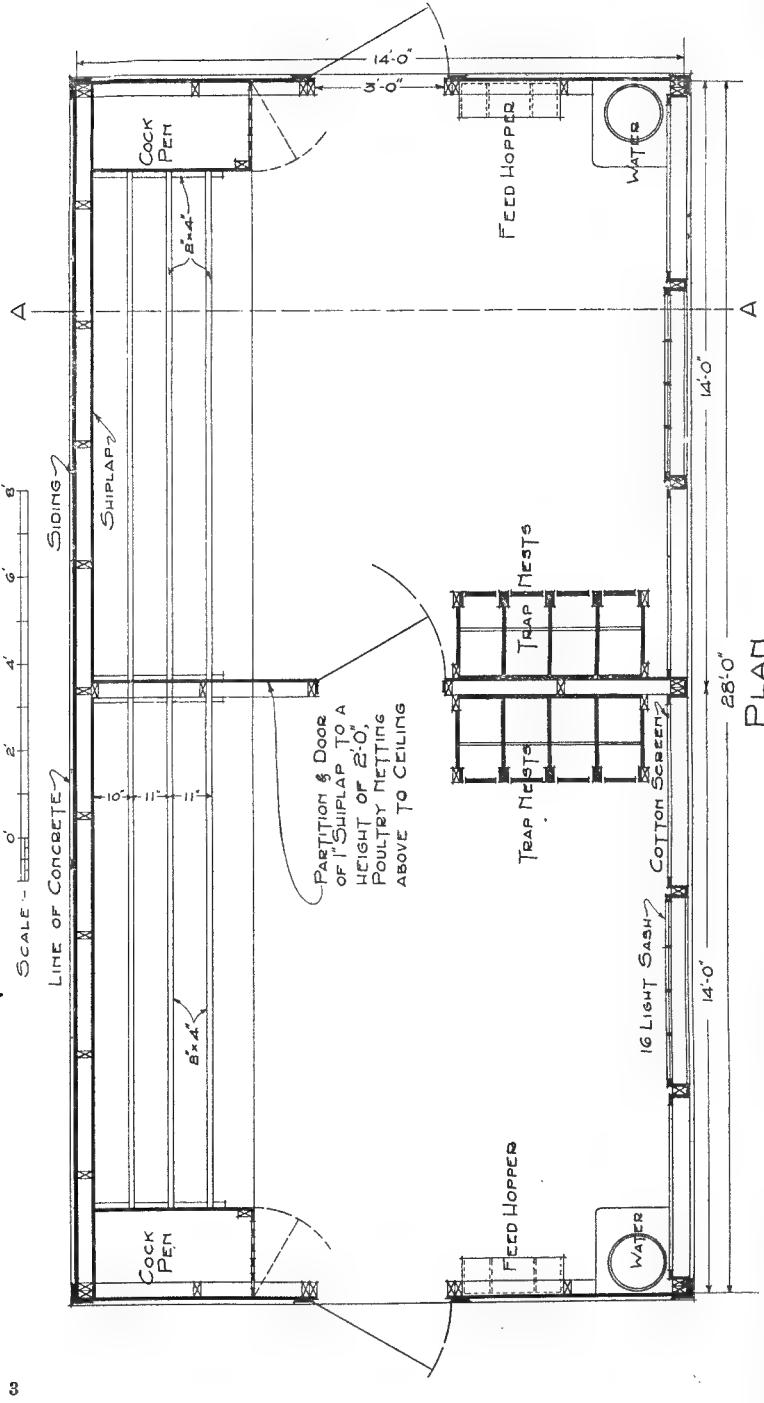
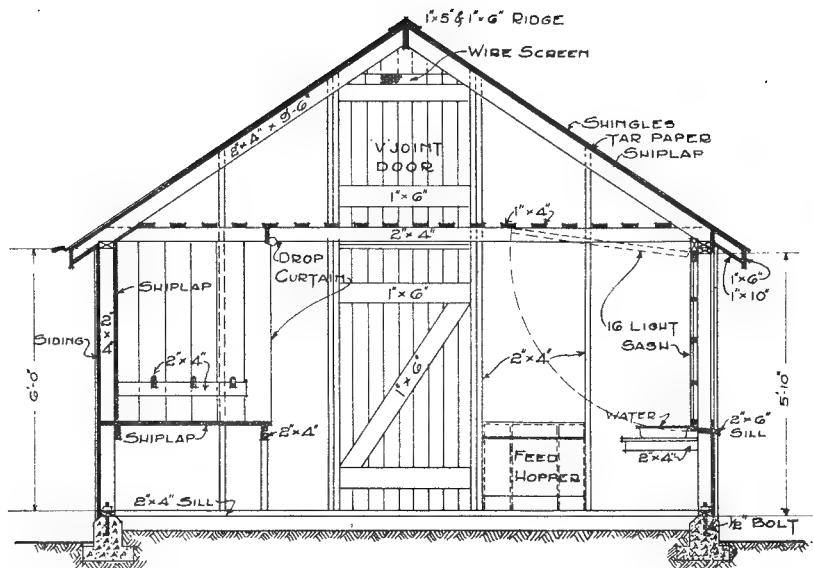
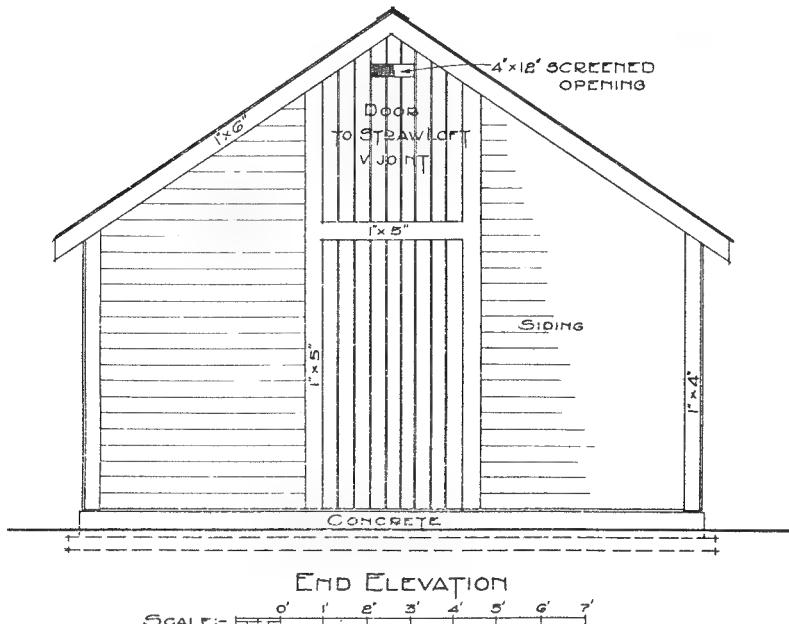


Fig. 1. Each pen is 14 feet square and will accommodate forty-five to fifty fowls.



SECTION ON A-A



PERMANENT POULTRY HOUSE NO 1

Fig. 2. A gable-roofed house with a small straw-loft and an earth floor.

• PERMANENT POULTRY House No 1 •

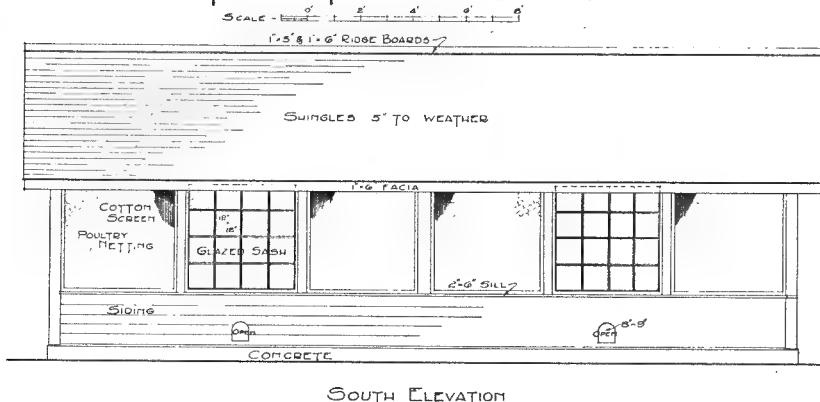


Fig. 3. Cotton windows give a more even temperature and better ventilation than any other system.

buildings are used on most big poultry plants: (1) Long permanent houses used for laying hens (not intended as breeders) and as winter quarters for all the stock; (2) small portable houses for breeding stock and growing chicks during the summer season.

Poultry buildings so designed that they are portable colony houses in summer, and in the fall become a section of a continuous laying-house for winter use, have for several years been in operation on the Prairies. Houses Nos. 2 and 3 as described in this bulletin are of this type. Since either may be built in any convenient size, they are recommended as suitable for the average Prairie farm.

PERMANENT POULTRY HOUSE No. 1.

Permanent Poultry-house No. 1 is a gable-roofed house with a small straw-loft. Each pen is 14 feet square and will accommodate forty-five to fifty birds. Such a house may be made any required length. An opening 6 or 8 inches square should be left in each gable to allow for circulation of air above the straw. Fresh straw should be put in the loft each autumn, care being taken to have it spread evenly over the whole of the slatted floor. The straw should be removed and the house thoroughly swept and disinfected in the spring.

The floor is earth. During summer the prairie sod will do, but for winter sufficient clay should be hauled to raise the floor-level 6 inches above the ground outside. This clay should be pounded

down solid; then if enough water is poured on and the top puddled and allowed to dry, a smooth hard surface will be formed. In the fall, as a precaution against draughts, it is well to bank the hen-house on the outside to a height of $2\frac{1}{2}$ feet.

No plans of yards or runs are given, because it is felt that on the Prairies it will be more profitable to fence the farm residence and the kitchen-garden than to shut up the fowls when so much good poultry-feed is going to waste outside.

Bill of Material, Permanent Poultry House No. 1.

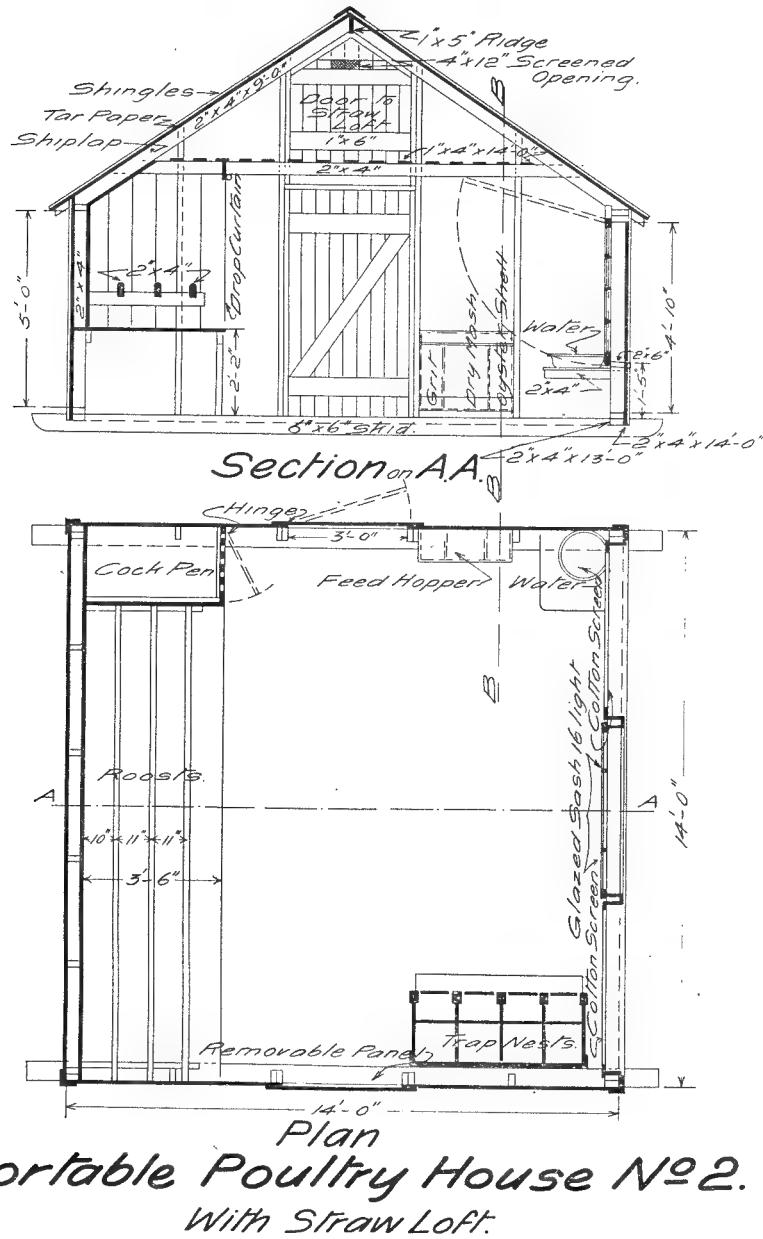
No. of Pcs.	ORDER LUMBER.			CUT TO MAKE.		Used for.
	Thick.	Wide.	Long.	No.	Long.	
4	2	6	14	2	Ft. in.	Ridge.
				2	14 0	Window-sills, dressed four sides.
29	2	4	14	7	14 0	Sills.
				6	14 0	Plates.
				4	14 0	Droppings-board joists.
				9	14 0	Collar-ties.
				4	3 6	Roost-supports.
23	2	4	12	6	4 5	Header above windows.
				4	6 0	Studs.
				13	6 0	Studs.
				10	5 10	Studs.
				5	3 0	Door-headers.
				6	12 0	Roosts.
				1	4 0	Studs, side partition.
35	2	4	10	1	4 2	Cock-pen frame. [ports.
				2	1 7	Droppings-board joist sup-
				6	1 9	Studs under windows.
				4	8 4	Studs, side wall.
				4	1 8	Water-stand supports.
				22	9 6	Rafters.
				8	10 0	Studs, side wall.
				2	3 6	Cock-pen frame.
2	2 dia.	---	14	1	1 11	Droppings-board joist sup-
4	1	10	16	2	14 0	Rollers [ports.
6	1	6	16	4	15 0	Soffit.
				5	3 0	Fascia.
				1	3 0	Door-battens.
				2	4 6	Door-battens.
				1	4 0	Window-casing.
4	1	6	14	2	14 0	Frieze.
4	1	6	10	2	14 0	Drop-curtain support.
				4	9 6	Roof-trim (side fascia).

BILL OF MATERIAL, PERMANENT POULTRY HOUSE No. 1.—*Concluded.*

ORDER LUMBER.				CUT TO MAKE.		Used for.
No. of Pcs.	Thick.	Wide.	Long.	No.	Long.	
2	In.	In.	Ft.		Ft. in.	
2	1	5	16	2	15 0	Ridge-board.
				2	6 3	Door-casing.
				1	3 0	Door-casing.
2	1	5	14	4	6 6	Corner-boards.
1	1	5	12	1	4 0	Door-casing.
				2	4 0	Window-casing.
2	1	5	10	2	10 0	Door-casing.
6	1	4	16	2	15 0	Ridge-board.
				12	4 0	Window-jambs.
				4	4 0	Window-casings.
46	1	4	14	2	14 0	Collar-ties (against wall).
				36	14 0	Ceiling-strips.
				4	6 6	Corner-boards.
				16	4 6	Cotton screens.
				2	4 3	Wire screens.
1	1	4	10	2	4 3	Wire screens.
2	1	2	10	2	3 0	Door-stop.
				2	6 0	Door-stop.
4	1	2	10	4	10 0	Door-stop.

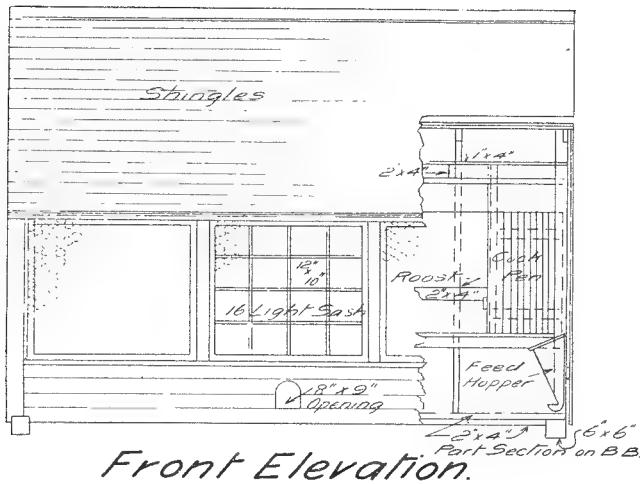
- 1,200 feet, board measure, shiplap.
 500 feet, board measure, siding.
 60 feet, board measure, V-joint for doors.
 4,500 B.C. red cedar edge-grain shingles (18 bundles).
 2 sashes, 1½", 16 lights, 12" x 12".
 4 bundles lath.
 8 buttons.
 8 hooks and eyes, 2½".
 2 thumb-latches.
 15 lb. 4" common nails.
 10 lb. 2¼" flooring-nails.
 20 lb. 2½" common nails.
 15 lb. shingle-nails, zinc-clad or best-quality galvanized.
 12 bolts 5/8" x 8", with washers, for foundation.
 2 pairs hinges, 6" T, for door.
 6 pairs hinges, 5" T, for sashes and screens.
 2 pairs hinges, 2" butts, for cock-pens.
 1 pair hinges, 2" double-acting spring, for partition door.
 3 rolls tar-paper.
 1 piece poultry netting, 4' x 26'.
 1 piece poultry netting, 5' x 14'.
 2 lb. staples.
 2 pieces unbleached cotton, 3' 6" x 14'.
 4 pieces unbleached cotton, 4' x 4'.
 2 single and 2 double awning-pulleys.
 75 feet cotton clothes-line for drop-curtain.
 3 yards gravel for foundation.
 15 bags cement for foundation.

Scale 0 2 4 6 8 10 12



Portable Poultry House No. 2.
With STRAW LOFT.

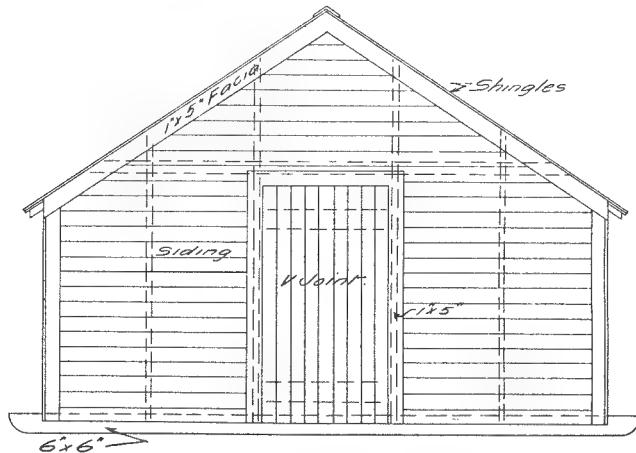
Fig. 4. A gable-roofed house 14 feet square, with a straw-loft and set on skids.



Front Elevation.

Note The sides are constructed without any projecting roof so that by removing panels and doors any number of these houses may be placed side by side to form continuous laying houses for winter months. Cover joints between buildings with tar paper and 1x4 strip.

Scale. 0 2 4 6 8 10 12



Side Elevation.
Portable Poultry House №2.
With Straw Loft.

Fig. 5. The skids run from front to back, and the roof does not project at the ends; therefore any number of these houses can be placed end to end to form a continuous building.

PORTRABLE POULTRY HOUSE No. 2.

Portable House No. 2 is a gable-roofed house 14 feet square. The skids are placed from front to back. No projection is given to the roof at either end. There is a 3-foot door in the centre of one end and a removable panel of equal size in the end opposite. This arrangement makes it possible, after using a number of these as colony houses during the summer, to haul them to a convenient spot, remove the surplus doors and panels, and place them end to end to form a continuous house for winter; the open doorways giving a passage from pen to pen. The cracks between the houses should be covered with tar-paper and a 1-x 6-inch board nailed over this. A floor should be made of puddled clay, and the house banked on the outside, as in House No. 1.

Bill of Material, Portable Poultry House No. 2.

ORDER LUMBER.				CUT TO MAKE.		Used for.
No. of Pcs.	Thick.	Wide.	Long.	No.	Long.	
2	6	6	16	2	16 0	Skids.
1	2	6	14	1	13 6	Window-sill, dressed four sides.
16	2	4	14	12	9 0	Rafters.
				4	9 0	Studs, side walls.
				6	4 10	Studs, front wall.
				8	5 0	Studs, back wall.
				2	3 6	Roost-supports.
				2	1 1	Studs, under windows.
16	2	4	14	2	14 0	Sills on top of skids.
				2	13 0	Sills between skids.
				3	14 0	Plates, 1 back and 2 front.
				4	7 4	Studs, side wall.
				4	5 10	Studs, side wall.
				2	1 8	Water-stand support.
				2	3 4	Header above door.
				1	3 6	Cock-pen frame.
				2	1 11	Cock-pen frame.
				3	4 4	Trimmer above windows.
7	2	4	12	3	14 0	Ridge-board and droppings- Roosts. lboard joists.
				4	12 0	Collar-ties.
1	2	4	8	1	3 11	Cock-pen frame. [ports.
				2	1 9	Droppings-board joist sup-
1	2 dia.	..	14	1	14 0	Roller for drop-curtain.
1	1	8	16	1	14 4	Front fascia.
1	1	6	16	1	14 4	Back fascia.
1	1	6	14	1	14 0	Drop-curtain support.

BILL OF MATERIAL, PORTABLE POULTRY HOUSE No. 2.—*Concluded.*

ORDER LUMBER.				CUT TO MAKE.		Used for.
No. of Pcs.	Thick.	Wide.	Long.	No.	Long.	
1	1	6	12	4	3 0	Door-battens.
1	1	6	10	2	4 6	Door-battens.
1	1	6	6	2	3 0	Door-battens.
1	1	5	16	1	14 4	Ridge-board.
3	1	5	12	2	6 0	Door-trim.
				4	5 6	Corner-boards.
4	1	5	10	4	8 8	Roof-trim (side fascia).
2	1	5	8	2	4 0	Door-trim.
				2	3 7	Window-casing.
1	1	4	16	1	14 4	Ridge-board.
16	1	4	14	15	14 0	Ceiling (straw supports).
				4	3 6	Window-jambs.
2	1	4	12	2	12 0	Collar-ties.
4	1	4	10	4	4 6	Cotton-screen frames.
				4	5 6	Corner-boards.
6	1	4	8	2	3 6	Window-jambs.
				2	3 7	Window-casings.
				4	3 10	Cotton-screen frame.
				2	3 7	Wire-screen frame.
				2	4 2½	Wire-screen frame.
2	1	2	10	2	9 0	Door-stops.
2	1	2	6	2	6 0	Door-stops.
2	1	2	4	2	3 4	Door-stops.

504 feet, board measure, shiplap, in 14' lengths, for roofing, droppings-boards, sheathing, roosting-quarters, and cock-pen.

120 feet, board measure, siding for back and front, in 14' lengths.

260 feet, board measure, siding for sides, in 12' lengths.

60 feet, board measure, V-joint for door and panel, in 12' lengths.

2,000 B.C. red cedar edge-grain shingles (8 bundles).

1 sash, 1½", 16 lights, 12" x 10".

1 pair hinges, 6" T, for door.

3 pairs hinges, 5" T, for screens and sash.

1 pair hinges, 2" butts, for cock-pen.

4 buttons.

4 hooks and eyes, 2½".

1 thumb-latch.

5 lb. 4" common nails.

6 lb. 2½" common nails.

5 lb. 2¼" flooring-nails.

6 lb. shingle-nails, zinc-clad or best galvanized.

1 lb. staples.

2 rolls tar-paper.

1 piece poultry netting, 4' 6" x 13'.

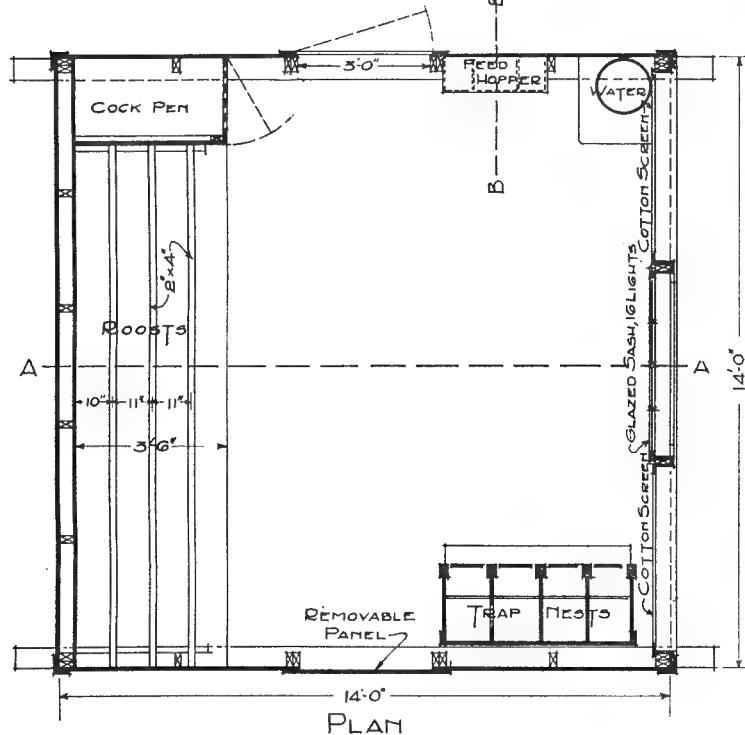
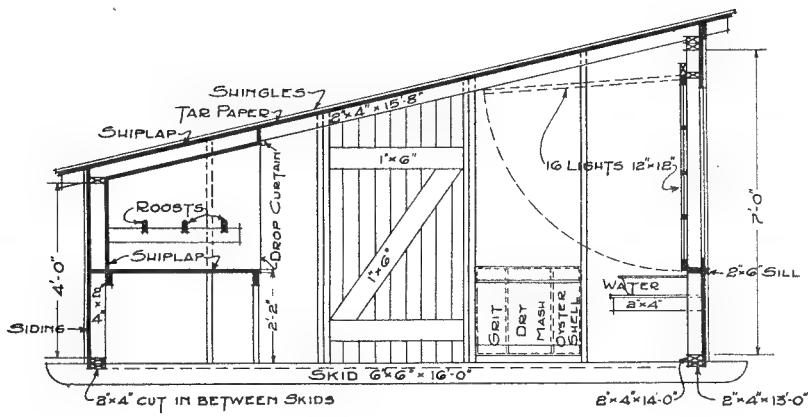
1 single and 1 double awning-pulleys.

36 feet cotton clothes-line for drop-curtain.

1 piece unbleached cotton, 3' 6" x 14', for drop-curtain.

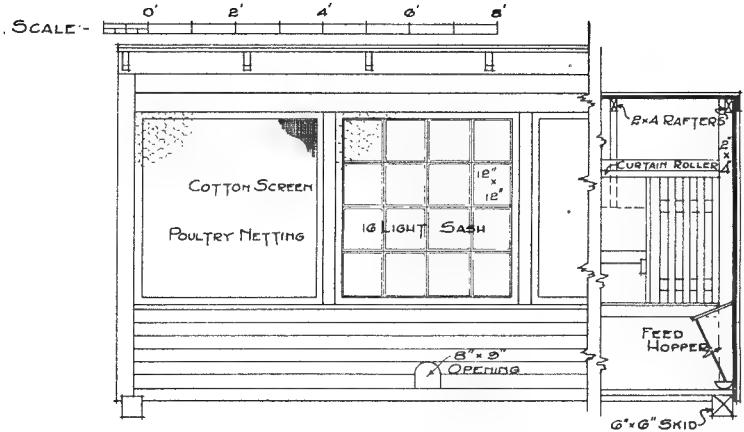
2 pieces unbleached cotton, 4' x 4' 6", for screens.

SCALE:- 0' 2' 4' 6' 8'



•PORTABLE POULTRY HOUSE №3•

Fig. 6. A shed-roofed house, very popular because of the simplicity and cheapness of its construction.

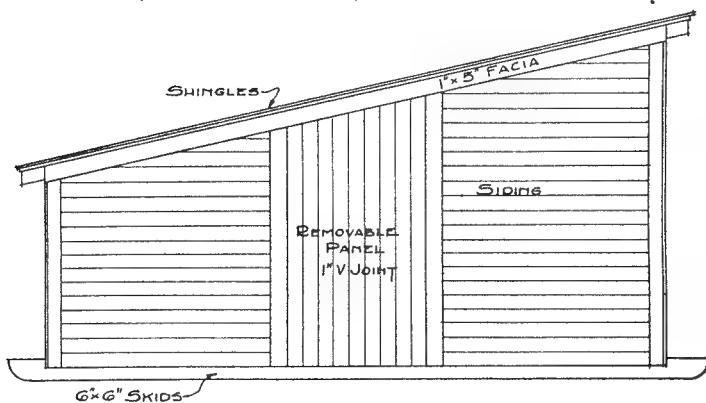


PART OF FRONT ELEVATION

PART SECTION
ON B-B

NOTE

THE SIDES ARE CONSTRUCTED WITHOUT ANY PROJECTING ROOF SO THAT BY REMOVING PANELS & DOORS ANY NUMBER OF THESE HOUSES MAY BE PLACED SIDE BY SIDE TO FORM CONTINUOUS LAYING HOUSES FOR WINTER MONTHS. COVER JOINTS BETWEEN BUILDINGS WITH TAR PAPER & 1x4 STRIPS



SIDE ELEVATION

• PORTABLE POULTRY HOUSE NO 3 •

Fig. 7. Like House No. 2, this may also be used as a separate house in summer and as one section of a continuous house in winter.

PORTABLE POULTRY HOUSE No. 3.

Portable House No. 3 is a single-slope or shanty-roofed house which, like No. 2, is so arranged that it may form a unit or section of a long house for winter use, while in the spring each section becomes a colony house, to be placed where required on free range. This house, because of the cheapness and simplicity of its construction, is most popular. If it is found in winter that frost gathers on the ceiling, a few inches of straw piled on the roof and weighted with poles will overcome the difficulty. For winter use a floor of puddled clay should be made, and the house banked on the outside, as in House No. 1.

Directions for building Portable Poultry House No. 3.

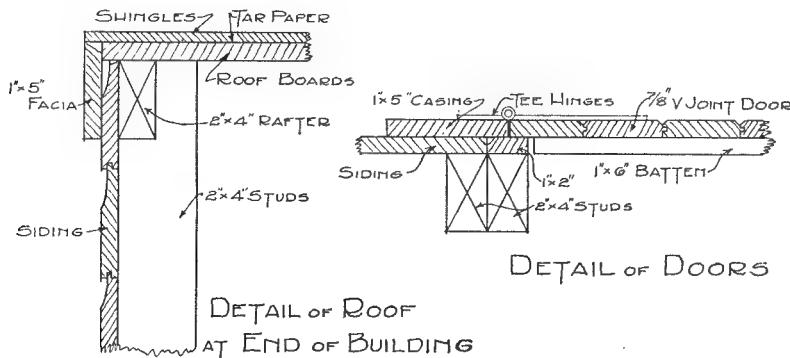
In all cases where dimensions are given it is intended that the builder should measure the building for the exact size of the material. The skids are to be of Fir or Larch, 6 x 6 x 16 feet, with the ends rounded as shown in section on A.A. They are placed 13 feet apart. The sills at the front and back are each composed of two pieces of 2 x 4, Fir or Larch, the lower one cut 13 feet long and let in between the skids, and the upper one 14 feet long and nailed to the lower one and to the top of the skids. These sills are placed so that they are exactly 14 feet from outside to outside. Be sure the sills and skids are at right angles to each other. Next cut the studs, eight for the back wall 4 feet long, six for the front wall 7 feet long, and three 1 foot 10½ inches for under the window-sill. Cut three pieces of 2 x 4, 14 feet long, for the plates. Nail one plate to the back-wall studs, spacing the studs equally and putting two at each end. On the back-wall studs nail a piece of 2 x 4, 14 feet long, so that the bottom of it will be 1 foot 7 inches from the bottom of the studs; this will be one of the joists for the droppings-board. After these are securely nailed, erect the rear-wall frame, nailing the studs well to the sills, and brace it plumb until the side walls are erected. The front wall has a double plate of 2 x 4, 14 feet long. The studs should be spaced equally, and when erected should be well nailed to the sills. This wall should also be braced plumb until the side walls go up.

Next cut the six rafters, first cutting one as a pattern. The rafters are 15 feet 8 inches long, and have a plumb cut on the front and back ends and are notched to fit the plates. A rafter should be placed at each end of the plates.

The side-wall studs have a piece 2 inches wide by 4 inches high cut out of them to fit the outside rafter (*see Fig. 8*) ; the remainder, 2 x 2, running up inside the rafter and nailed to it. The studs are placed 3 feet apart at the centre for the door. When the siding is put on it just covers one of these studs, and a piece of 1 x 2 is nailed up against it to cover the other stud. (*See Fig. 8.*)

The window-sill of 2 x 6, 13 feet 6 inches long, dressed four sides, should be cut to fit in between the studs. It should slope out $\frac{1}{2}$ inch in its width, and the studs, 1 foot $10\frac{1}{2}$ inches high, put under it at the centre of each opening, except the centre one, which is placed enough to one side to clear the door to the hen-run. The 2 x 4, 4 feet 4 inches, window-headers should be cut to fit in between the studs and nailed in 4 feet 4 inches above the stool.

A layer of tar-paper should be placed over the outside of the studs and rafters before the siding and roof-boards are nailed on. The siding should then be put on with flooring-nails.



• POULTRY HOUSE DETAILS •

FOR HOUSES N^o 2 AND 3.

Fig. 8. Simple and economical construction is a feature of these poultry-houses.

The shiplap should next be put on the roof, cutting it flush with the outside of the siding, and can then be covered with tar-paper. Let the tar-paper extend 4 inches over the sides. The 1 x 5 fascia strip should then cover shiplap and siding. (*See Fig. 8.*) The front and back fascias should then be fitted, cutting them out to fit the rafters. Then the corner-boards should be put on. In no case should the front or back siding project below the sills.

The shingles can then be put on. On account of the flat pitch, they should not be laid more than 4 inches to the weather, and a strip 1 x 6 should be nailed on top of them at the front of the roof.

The front droppings-board joist should next be put up and the droppings-board laid. This should be of the best of the shiplap. Then the roosting-quarters is to be sheathed in with shiplap as shown in the section on A.A. Then the cock-pen should be built, the side wall being of shiplap and the front of a slatted door hinged next the wall. The roosts fit in notches in the supports and are not nailed, so they can then be removed for cleaning the droppings-board if desired.

The window openings can next be cased, the 16-light sash hung, and the cotton screens made to fit over the openings as shown on the plan. The door and the panel can next be made of 1-inch V-joint and cut to fit. They are built alike, and either one can be used as the door.

Bill of Material, Portable Poultry House No. 3.

ORDER LUMBER.			CUT TO MAKE.			Used for.
No. of Pcs.	Thick.	Wide.	Long.	No.	Long.	
2	In.	In.	Ft.		Ft. in.	
2	6	6	16	2	16 0	Skids.
1	2	6	14	1	13 6	Window-sill, dressed four sides.
9	2	4	16	6	15 8	Rafters.
				8	4 0	Studs, back wall.
				3	1 10½	Studs, front wall under windows.
				1	2 8	Cock-pen frame.
				2	1 9	Droppings-board supports.
				2	1 8	Water-table supports.
17	2	4	14	2	14 0	Sills on top of skids.
				2	13 0	Sills cut in between skids.
				3	14 0	Plates, 1 front and 2 back.
				6	7 0	Studs, front wall.
				2	7 3	Studs, side wall.
				4	6 8	Studs, side wall at doors.
				2	14 0	Droppings-board joists.
				3	4 4	Trimmers above windows.
				2	3 6	Roost-supports.
				2	3 6	Cock-pen frame.
6	2	4	12	4	5 10½	Studs, side walls at doors.
				3	12 0	Roosts, rounded on top.
				2	5 3	Studs, side wall.

BILL OF MATERIAL, PORTABLE POULTRY HOUSE No. 3.—Concluded.

No. of Pcs.	ORDER LUMBER.			CUT TO MAKE.		Used for.
	Thick.	Wide.	Long.	No.	Long.	
1	In. 2 dia.	In. ---	Ft. 14	1	Ft. in. 14 0	Roller for drop-curtain.
1	1	8	16	1	14 4	Front fascia.
1	1	6	16	1	14 4	On top of front row shingles.
1	1	6	14	1	14 0	Drop-curtain support.
1	1	6	12	4	3 0	Door-battens.
1	1	6	10	2	4 6	Door-battens.
3	1	5	16	2	14 6	Roof-trim (side fascia).
				2	7 6	Front corner-board.
4	1	5	12	2	6 9	Door-trim.
				2	6 0	Door-trim.
				2	4 6	Back corner-board.
				2	4 6	Window-casing.
1	1	5	8	2	3 4	Top door-stop.
1	1	4	16	2	7 6	Side corner-boards.
7	1	4	14	2	4 4	Corner-boards.
				6	4 4½	Window-jambs.
				2	4 6	Window-casings.
				4	4 6	Cotton-screen frames.
				4	4 4	Cotton-screen frames.
				2	4 4½	Wire-screen frames.
				1	4 2	Wire-screen frame.
1	1	4	6	1	4 2	Wire-screen frame.
1	1	2	14	2	6 9	Door-stop.
1	1	2	12	2	6 0	Door-stop.

448 feet, board measure, shiplap, in 14' lengths, for roof, droppings-boards, cock-pen, sheathing, and roosting-quarters.

130 feet, board measure, siding for front and back, in 14' lengths.

200 feet, board measure, siding for sides, in 12' lengths.

60 feet, board measure, V-joint for doors, in 12' lengths.

2 bundles lath.

2,000 B.C. red cedar edge-grain shingles (8 bundles).

1 sash, 1½", 16 lights, 12" x 12".

1 pair hinges, 6" T, for door.

3 pair hinges, 5" T, for screens and sash.

1 pair hinges, 2" butts, for cock-pen.

4 buttons.

1 thumb-latch.

4 hooks and eyes, 2½".

1 single and 1 double awning-pulley.

6 lb. 4" common nails.

6 lb. 2¾" flooring-nails for siding.

10 lb. 2½" common nails.

6 lb. shingle-nails, zinc-clad or best-quality galvanized.

1 lb. staples.

- 2 rolls tar-paper.
 1 piece poultry netting, 4' 6" x 13'.
 1 piece cotton, 3' 6" x 14', for drop-curtain.
 2 pieces cotton, 4' x 4' 6", for screens.
 36 feet cotton clothes-line for drop-curtain.

Trap Nests.

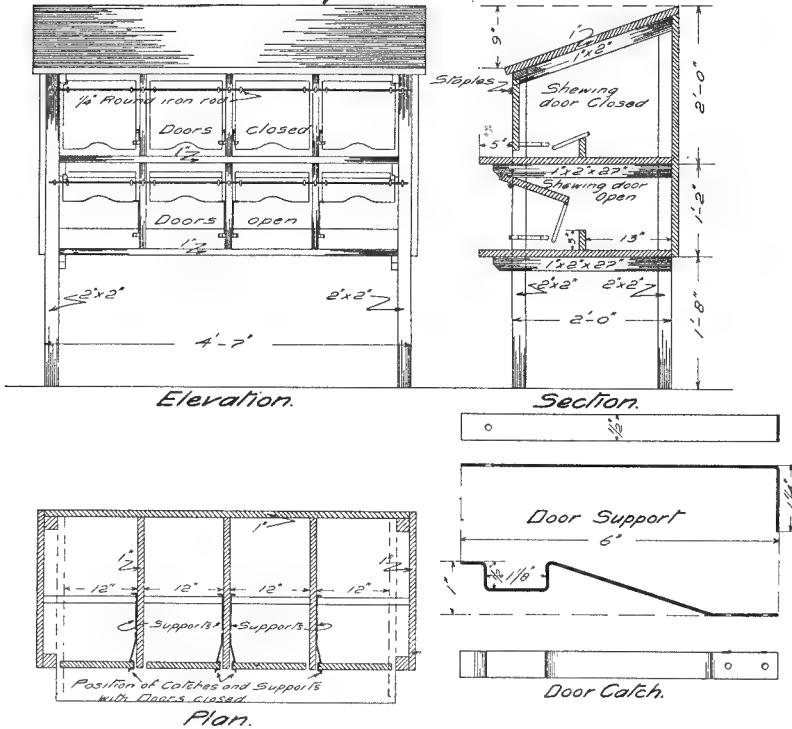


Fig. 9. Merely a common nest with a catch on the door. They are easily made and can be used as common nests whenever desired.

A trap-nest is merely an ordinary nest with the addition of a door, which may be set so that a hen, when entering, releases a catch and the door closes behind her. She cannot get out again until released.

Each hen should wear a numbered leg-band, and each egg gathered should be credited on a record sheet hung in the pen to the hen that laid it. In breeding season the hen's number is marked on the shell of the egg. In this way it is possible to learn just how many eggs each hen lays, what proportion of these will hatch, and by marking chicks when hatched, so we may distinguish them when they grow up, to know what kind of stock we are getting from each. Some poultry-

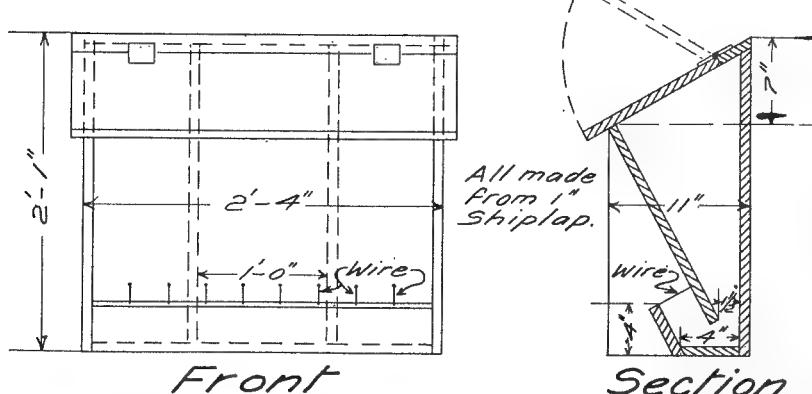
men may not have time to operate trap-nests the year round, but all should do so during the winter and early spring, so as to select the winter layers for breeding purposes.

The trap-nest described here is easily made. At any time the doors may be fastened open so they will not trap the hens. Doors will stay on better if bale-wire is used to fasten them to the iron rod than when staples are used. Ordinary hoop-iron will make satisfactory supports and catches for the doors.

Bill of Material for Trap-nests.

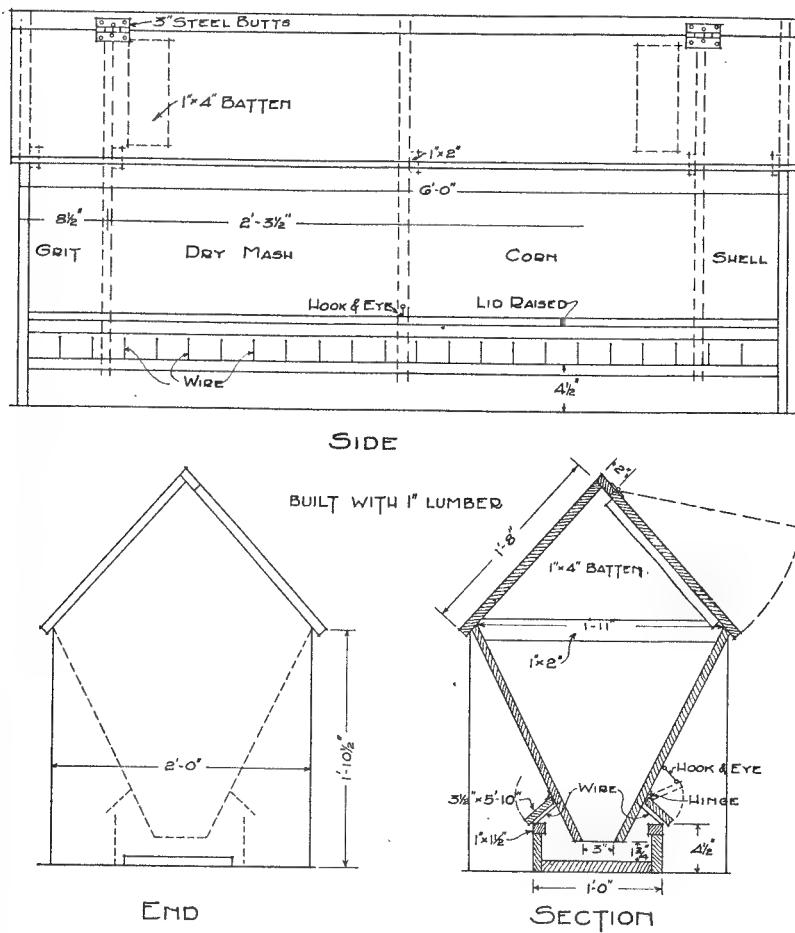
- 2 pieces 2" x 4", 4' 9", for legs.
- 2 pieces 2" x 4", 4', for legs.
- 2 pieces, 1" x 2", 2', for roof-supports.
- 4 pieces 1" x 2", 2' 2", for floor-supports.
- Shiplap to make 2' 3" x 4' 8" for roof.
- Shiplap to make 3' 2" x 4' 2" for back.
- Shiplap to make 2' 4" x 8' 4" for 2 floors.
- Shiplap to make 2' x 6' 4" for 2 sides.
- Shiplap to make 1' 11" x 6' for partitions, top sections.
- Shiplap to make 1' 11" x 3' 6" for partitions, bottom sections.
- 8 pieces 1" x 3" x 12" for nest-fronts.
- 8 pieces 10" x 10" x 11" for doors.
- 2 pieces $\frac{1}{4}$ " round iron 4' 4 $\frac{1}{2}$ " long for door-supports.
- 26 staples for fixing $\frac{1}{4}$ " round-iron rod to frame and doors.
- 8 metal door-supports, galvanized iron, $\frac{1}{2}$ " x 6 $\frac{1}{4}$ ".
- 8 spring catches for doors, $\frac{1}{2}$ " x 7 $\frac{1}{2}$ ".
- 24 screws, 1" No. 8.
- 1 lb. 2 $\frac{1}{2}$ " wire nails.

FEED-HOPPERS.



Feed Hopper for House.

Fig. 10. A self-feeder to be hung on the wall. It has three compartments, one each for grit, oyster-shell, and dry mash.



• FEED HOPPER •

FOR USE ON RANGE

Fig. 11. A four-compartment self-feeder to be placed on the ground outdoors.

Bill of Material, Feed-hopper for House.

(See Fig. 10.)

- 4 pieces 1" x 11" x 1' 11" for sides and divisions.
- 1 piece 1" x 3" x 2' 5" for cover.
- 1 piece 1" x 10" x 2' 5" for lid.
- 3 pieces 1" x 10" x 2' 2" shiplap for back.
- 2 pieces 1" x 10" x 2' 2" shiplap for front.
- 2 pieces 1" x 4" x 2' 2" for front and bottom of trough.

- 1 pair hinges, 2" butts.
 8 pieces No. 9 wire, 4" long.
 $\frac{1}{4}$ lb. shingle-nails.
 $\frac{1}{4}$ lb. 2 $\frac{1}{2}$ " finishing-nails.

If desired, the back, front, and trough at the bottom can be made of galvanized sheet iron. Quantity of metal required, if constructed in this way, will be as follows:—

- 1 piece galvanized iron, 2' 8" x 2' 4", for back and bottom.
 1 piece galvanized iron, 1' 7" x 2' 4", for front.

BILL OF MATERIAL, FEED-HOPPER FOR RANGE.

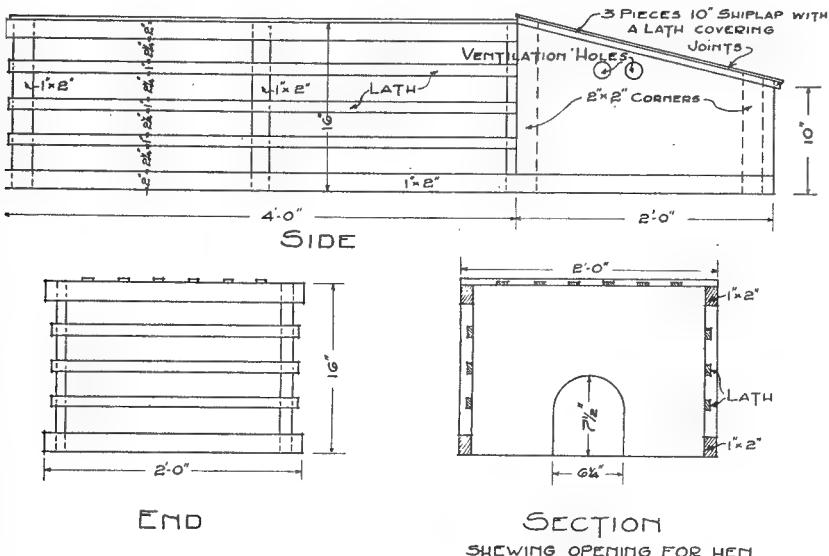
(See Fig. 11.)

- 1 piece 1" x 10" x 6' for bottom of hopper.
 2 pieces 1" x 3 $\frac{1}{2}$ " x 5' 10" for sides of hopper-trough.
 2 pieces 1" x 1 $\frac{1}{2}$ " x 5' 10" for top of sides of hopper-trough.
 2 pieces 1" x 3 $\frac{1}{2}$ " x 5' 10" for lids of trough.
 6 pieces 1" x 8" x 5' 10" shiplap for sides.
 6 pieces 1" x 8" x 3' shiplap for ends.
 9 pieces 1" x 8" x 2' 6" shiplap for partitions.
 3 pieces 1" x 8" x 6' 2" shiplap for cover.
 1 piece 1" x 2" x 6' 2" for cover to hinge to.
 3 pieces 1" x 8" x 6' 2" shiplap for lid.
 3 pieces 1" x 4" x 1' 5" for battens.
 22 pieces No. 9 wire, 4" long.
 5 pieces 1" x 4" x 1' 11" battens (not shown on cut) across partitions.
 1 lb. 2 $\frac{1}{2}$ " finishing-nails.
 $\frac{1}{2}$ lb. 2" finishing-nails.
 3 pairs hinges, 3" butts.
 2 hooks and eyes, 2 $\frac{1}{2}$ ".

COOP FOR SETTING HEN.

As soon as the frost is out of the ground in the spring, a dozen coops like the cut will prove great labour-savers. Place them on a high spot where no water will lie, hollow out a place in the sod, put the nest material in this, shape it like a nest, put in a nest-egg or two; when it is quite dark, move the broody hen and put her on the eggs in the nest. Next place the coop over her and with a piece of board close the door into the lath runway; keep door closed till the second morning, then take away the board and put some whole grain and a can of water in the runway. The hen will come off to feed; if she goes back on the nest again, it will usually be safe to give her eggs that evening. Look at the eggs every two or three days, and if the shells are dirty, take a rag and some clean warm water and wash them. This will open up the pores in the shells so the chicks growing inside can get air. If the shells are left dirty the chicks will suffocate.

In preparing a nest as described above in the early spring when the ground is cold, care should be taken to have an abundance of non-conducting nest material to prevent the eggs being chilled by too close contact with the cold ground.



• COOP FOR SETTING HEN •

Fig. 12. Great labour-savers, for use outdoors in spring and summer.

Bill of Material, Coop for Setting Hen.

- 2 pieces 2" x 2" x 1' 4" for front corner-posts.
- 2 pieces 2" x 2" x 11" for back corner-posts.
- 2 pieces 1" x 2" x 6' for bottom strips.
- 2 pieces 1" x 2" x 4' for top strips.
- 3 pieces 1" x 2" x 1' 10" for end and centre cross-pieces.
- 4 pieces 1" x 2" x 1' 4" for end and centre upright pieces.
- 9 laths, 4', for sides and top.
- 3 laths, 2', for ends.
- 3 laths, 2' 2", for roof over joints of roof-boards.
- 1 piece 1" x 10" x 1' 10" for back.
- 2 pieces 1" x 8" x 1' 10" shiplap for front.
- 4 pieces 1" x 8" x 2' shiplap for sides.
- 3 pieces 10" shiplap, 2' 2" long, for roof.
- 1 lb. 2½" common nails.
- ¼ lb. lath-nails.

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HON. WILLIAM R. ROSS, K.C., Minister of Lands.

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It is the **easiest** to work; **any one** can use it.

A wooden building is by far the **simplest** to erect.

Wood is **attractive** in appearance and has **great variety and beauty** for interior finish.

Unlike metal and masonry, wood is almost a **non-conductor** of **heat** and **cold**.

A building with wooden walls and a wooden shingle roof is **warm** in winter and **cool** in summer and **dry** all the time.

Wood is therefore particularly **suitable** for **houses** and **barns**.

Wood is very **durable** in all kinds of building work **above ground**.

It will give **generations of service**, especially if well painted where exposed to the weather.

For use in **contact** with the **soil**, as mud-sills or fence-posts, a preservative should be applied or a specially resistant wood such as Western Red Cedar should be used.

BRITISH COLUMBIA TIMBER FOR THE PRAIRIE FARM.

Quantity.—The Province contains over 400,000,000,000 feet board measure, or over half the standing timber of Canada. There is plenty of it.

Quality.—The forests of British Columbia grow the best timber it is possible to obtain.

Usefulness.—The timber trees of British Columbia supply the most useful of all **woods**, particularly for building work, because of their lightness, strength, and ease of working.

British Columbia timber is "made in Canada." The lumber industry engaged in its manufacture is one of the best markets for the products of the farms of Western Canada. It is sound sentiment and sound business for Canadian farmers to buy British Columbia timber.

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Woods differ in their qualities of strength, hardness, and durability. Certain kinds are particularly suited for certain uses. It is important to use the right wood in the right place.

(1.) **General Building Work.**—Douglas Fir, Western Larch, Western Hemlock, Mountain Western Pine, Mountain and Coast Spruce, Western White Pine.

(2.) **Framing and Dimension Timber, Posts, Beams, Rafters, Studs, Sills, Plates, Joists.**—Light construction: Same as No. 1. Heavy construction: Douglas Fir, Western Larch, Western Hemlock.

(3.) **Rough Lumber or Sheathing not exposed to Weather (Inside Work or covered by Siding or Lath and Plaster).**—Any British Columbia wood.

(4.) **Rough Outside Sheathing exposed to Weather (Outbuildings, etc.).**—Douglas Fir, Western Larch, Mountain Western Pine, Western Red Cedar, Coast and Mountain Spruce, Western White Pine.

(5.) **Siding.**—Western Red Cedar, Douglas Fir, Mountain Western Pine, Mountain and Coast Spruce.

(6.) **Roofing.**—Western Red Cedar edge-grain shingles, with galvanized, zinc-clad, zinc, or copper nails.

(7.) **Flooring, Stair Stepping, Sidewalks.**—Douglas Fir, Western Larch, Western Hemlock. Use edge-grain stock for hardest wear.

(8.) **Interior Finish, Panelling, Trim.**—Douglas Fir, solid or veneer (a beautiful grain, superior to most hardwoods), Western Larch, Western Hemlock, Western Red Cedar, Mountain Western Pine, Western White Pine.

(9.) **Doors, Window-sash.**—Douglas Fir, Western Red Cedar, Western Larch, Mountain Western Pine, Western White Pine.

(10.) **Fence-pickets.**—Douglas Fir, Western Larch, Western Red Cedar, Mountain Western Pine.

- (11.) **Piling, Cribbing.**—Douglas Fir, Western Larch.
- (12.) **Silos, Tanks.**—Douglas Fir, Western Larch, Western Red Cedar.
- (13.) **Ground-sills, Skids, Fence-posts, Poles, Conduits, Drains, and wherever Wood is in Contact with the Ground.**—Western Red Cedar or creosoted wood. Use Douglas Fir or Western Larch where strength and hardness are essential.
- (14.) **Furniture, Tables, Settees, etc.**—Douglas Fir, Mountain Western Pine, Coast or Mountain Spruce, Western White Pine, Western Red Cedar.

NOTE.—Western Hemlock is superior in every way to Eastern Hemlock—an entirely different tree—and should not be confused with it.

BRITISH COLUMBIA FOREST SERVICE BULLETINS.**Farm Buildings Series.**

1. Combination or General Purpose Barns for Prairie Farms.
2. Dairy Barns, Milk and Ice Houses for Prairie Farms.
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4. Horse Barns for Prairie Farms.
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Timber Series.

11. British Columbia Box Woods.
12. How to finish British Columbia Woods.
13. British Columbia Tie Timber.
14. British Columbia Dimension Timber.

The bulletins of the Farm Building Series are obtainable free from any sawmill, lumber-dealer, or agricultural organization; those of the Timber Series from Victoria. Of the latter series, Bulletin No. 12, "How to finish British Columbia Woods," is of special interest to home builders and owners, carpenters, architects, and building contractors. Further information concerning British Columbia timber may be obtained by writing to the Chief Forester, Victoria, B.C.

OTHER PUBLICATIONS.

Many publications and much useful information on farming and related subjects can be obtained on request from the various Government Public Service organizations of Canada, listed below.

(1.) Alberta:

Department of Agriculture, Edmonton.
University of Alberta, Edmonton.
Agricultural Schools at Olds, Vermilion, and Lethbridge.
Dominion Experimental Stations at Lethbridge, Lacombe, and Fort Vermilion.

(2.) British Columbia:

Department of Agriculture, Victoria, B.C.
Dominion Experimental Farm, Agassiz, and Experimental Stations at Sidney, Salmon Arm, Summerland, and Invermere.

(3.) Dominion:

Department of Agriculture, Ottawa, Ont.
Dominion Forestry Branch, Ottawa, Ont.

(4.) Manitoba:

Department of Agriculture, Winnipeg.
Manitoba Agricultural College, Winnipeg.
Dominion Experimental Farm, Brandon, and Experimental Station at Morden.

(5.) Saskatchewan:

Department of Agriculture, Regina.
University of Saskatchewan, Saskatoon.
Dominion Experimental Farm, Indian Head; Forestry Station, Indian Head; and Experimental Stations at Scott and Rosthern.

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